

ABSTRACT

A filter (50) with interconnected modular basic units (10) and with a delay line (51), equipped with takeoff points, to furnish delayed sampling values ($x_1, \dots, x_N; x_i$) of a digital signal (x). Each basic unit (10) contains a programmable weighting device (11, 12), a linkage device (13, 14), and a delay device (15), which delays the data conducted to it by a single period (T) of the sampling clock pulse or by a simple integer multiple thereof. The filter (50) further contains a programmable control device (52), which switches over or switches off a part of the data inputs (16, 17) of the basic unit (10) to achieve forward and/or backward filtering and/or sign inversion and/or a change of the active filter length.